PRE-APPEAL BRIEF REQUEST FOR REVIEW	Docket Number (Optional) 7784-000948/US	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] On <u>Not Applicable</u>	Application Number 10/765,605	Filed January 27, 2004
	First Named Inventor Bo Valdemar Vaaben	
Signature_____ Typed or printed name <u>Mark D. Elchuk</u>	Art Unit 3628	Examiner Tonya S. Joseph

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 33,686

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

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Reg. No. 55,861 for
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Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:   10/765,605

Filing Date: January 27, 2004

Applicant: Bo Valdemar Vaaben

Group Art Unit: 3628

Examiner: Tonya S. Joseph

Title: METHOD AND SYSTEM FOR RESCHEDULING PASSENGERS

Attorney Docket: 7784-000948/US

Mail Stop Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRE-APPEAL STATEMENT

Sir:

In response to the Final Office Action mailed April 17, 2008, the present Pre-Appeal Statement is being submitted concurrently with the filing of a notice of appeal under 37 C.F.R. §41.31 and the required fee under §41.20(b)(1). It is respectfully requested that the final rejections of the pending claims be reversed and the application passed to issue.

BRIEF OVERVIEW OF CLAIMED SUBJECT MATTER

The present disclosure relates to a method of generating solutions for scheduling and rescheduling itineraries of objects such as passengers and cargo being transported

on a mobile platform, and for re-accommodating such passengers and cargo after a disruption in operation. This involves receiving a disruption specification and grouping the objects to be rescheduled into subproblems. A first algorithm may be applied to quickly reach an initial group of solutions for each object. A subclass of the objects may be identified as being unsuitably rescheduled, and a second algorithm may be applied to reschedule the subclass by varying the original itinerary to generate rescheduling solutions for the subclass. The subclass of objects may be excluded from the other objects noted in the disruption specification and a third algorithm may be applied to the remaining objects to determine rescheduling solutions for the remaining objects. This enables the rescheduling of all objects to be optimized.

REJECTION UNDER 35 U.S.C. § 102(B)

Claims 1-10 and 32 have been improperly rejected as being anticipated by "Heuristic Procedure", which was attached as reference "U" on PTO-892 Form (hereinafter referred to simply as "Heuristic"). During prosecution claim 1 was amended to more positively recite the grouping operation, and that each of the subproblems is defined by one of the objects having the <u>same original origin and destination</u>, as follows:

> …grouping the objects <u>in the disruption specification</u>
> to be rescheduled into subproblems, wherein each <u>said</u>
> subproblem is defined by each <u>one of the objects</u> <s>object</s>
> therein having the same original origin and destination….

Heuristic does not disclose or suggest the subject matter presented in claim 1. Heuristic is essentially a very general discussion of the variables and limitations that must be considered in aircraft rescheduling systems and methods. There is little in the way of specifics for achieving specific rescheduling solutions for different objects having different itineraries. Heuristic seems to be concerned primarily with the <u>reassignment of aircraft to specific flights</u>. As discussed on page 4 of Heuristic, it is explicitly stated that:

> *The primary decision that has to be made is the*
> *reassignment of aircraft to flights, within the confines of crew*
> *availability, the number of landing slots at a given station,*
> *and the level of ground resources.*

Further discussion on page 4 of Heuristic explains how using the tail number of the aircraft helps to form a "path based formulation" to assign an aircraft to a predetermined sequence of flights.

However, the method of claim 1 is directed to initially grouping "objects" of a given problem into "subproblems", as called for in paragraph 3 of the body of claim 1. Each specific subproblem is further defined as being made up of those objects having the same origin and destination. This is fundamentally different from the scenario described in Heuristic, where the problem being considered is how to route a given airplane most efficiently. In claim 1, for example, the "objects" may be passengers on a given aircraft, and each subproblem would therefore be comprised of those passengers having the same destination and origin. Heuristic does not describe or suggest defining a number of "objects" into specific subproblems, where each of the objects in a given subproblem have a common origin and destination. Again, Heuristic is simply focusing on reassigning specific aircraft to specific routes.

Heuristic also does not disclose or suggest the operation of subparagraphs 5 and 6 of claim 1 regarding:

> "involving "identifying a subclass of objects that are unsuitably rescheduled in the initial solutions" and "applying a second algorithm for rescheduling the subclass that allows varying the original itinerary to generate rescheduling solutions for the subclass".

At most, Heuristic merely discloses a list of considerations that must be taken into account when trying to determine whether a <u>particular aircraft</u> can be reassigned to fly a new flight sequence (page 5), as well as some algorithms that may be used to consider specific factors in deciding on a specific reassignment (page 6; "aircraft utilization", "crew availability", "ATC slot allocation", etc.). The "model" that the Examiner refers to is an "Objective Function" minimum cost model (page 5). The known variables, indices and decision variables are elements of the Objective Function where all permutations of the indices are exercised to determine the combination having the minimum cost. This is contradictory to the objectives of Claim 1. Furthermore, the subsequent equations on page 6 of Heuristic are simply constraint functions that the Objective Function is "subject to". These are <u>not subproblems grouped by objects having the same original origin and</u>

<u>destination</u> to be solved. Nor are they sub problems where a first algorithm is applied without allowing varying of the origin and destination of the objects. Thus, the Examiner's interpretation of the variables, indices and optimization model of Heuristic does not teach grouping objects into subproblems having the same origin and destination and applying a first algorithm to each sub problem without allowing varying the origin and destination of the subproblem. As a result, the Examiner has failed to point to anything specific in Heuristic that discloses or suggests the specific operations set forth in subparagraphs 5 and 6 of claim 1.

REJECTION OF NEW CLAIM 32 UNDER 35 U.S.C. §102(B)

The Examiner summarily, and improperly, rejected claim 32 as being anticipated by Heuristic. New claim 32 expressly recites <u>applying a third algorithm that is used in an operation on the rescheduling solutions created by the second algorithm</u>. In particular, the last paragraph of claim 32 includes:

> ...applying a third algorithm to said rescheduling solutions to remove selected ones of said rescheduling solutions, to recreate a set of optimal rescheduling solutions.

The last paragraph of claim 32 has been added to more specifically call out the operation of "applying a third algorithm" to the rescheduling solutions (i.e., the solutions obtained using the second algorithm), to <u>remove selected ones of the rescheduling solutions, to create a set of optimal rescheduling solutions."</u> Again, there is absolutely nothing in Heuristic that would disclose or suggest using a <u>third algorithm</u> to further <u>selectively remove certain ones of rescheduling solutions determined from the use of a second algorithm</u>. Heuristic simply gives no specifics that even remotely disclose the level of operational specifics recited in new claim 32.

Heuristic Is Focused on Re-Routing Specific Aircrafts, Not Subgroups of Objects on A Given Affected Aircraft

The overall goal of Heuristic can be found on page 3, lines 16 and 17:

"The decision maker will in effect be trying to assign aircraft to the most valuable flights, while achieving maintenance routing requirements."

Further on page 4, lines 7-9, it is emphasized that *"Decisions about rerouting aircraft will be affected by the availability of eligible flight crews at each station, as well as adequate ground resources to process aircraft and passengers at a station."* Again, this shows that Heuristic is concerned with looking at those factors that determine *a new, specific route for each aircraft,* rather than new itineraries for specific subgroups of objects travelling on an aircraft, where certain objects have a common origin and destination.

The Examiner has also given short shrift to the language added at the end of Claim 32 that describes what the third algorithm is doing to the rescheduling options calculated by the second algorithm. The Examiner stated that this language is merely a "statement of intended result". This is patently wrong. The limitations at the end of claim 32 expressly set forth that a new "optimal solution" set is being created from information generated by the second algorithm, where the optimal solution has removed from it some of the rescheduling solutions generated at by the second algorithm. This is not even remotely disclosed in Heuristic, and the Examiner has not pointed to anything specific in Heuristic to show otherwise.

CONCLUSION

For the above-mentioned reasons, it is believed that the pending claims are patentable over the cited art and such action is requested.

Respectfully submitted,

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Dated: 6/25/08

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